
Wiring installation

Wiring for telephones and attendant consoles

This chapter discusses the installation and removal procedures for wiring for telephones and attendant consoles.

Each 500/2500-type telephone requires one pair of Z station wire or equivalent. Each SL-1 telephone requires two pairs of Z station wire or equivalent. You can use existing 16- or 25-pair connectorized cable. Each attendant console requires a 16-pair cable terminated on an Amphenol connector.

When zone cabling and conduit are used, assign a block of numbers or letters to each zone (see [Figure 2](#)). Allow for growth when assigning blocks of numbers.

Cable markers are normally an adhesive-backed cloth tape 1/2 inches wide by 3-1/2 inches long (15 mm by 65 mm) with preprinted numbers.

For limits and cabling, refer to [Figures 3](#) through [5](#).

For a list of terminal connections, see [Table 1](#).

Figure 2
Zone cabling and conduit assignment

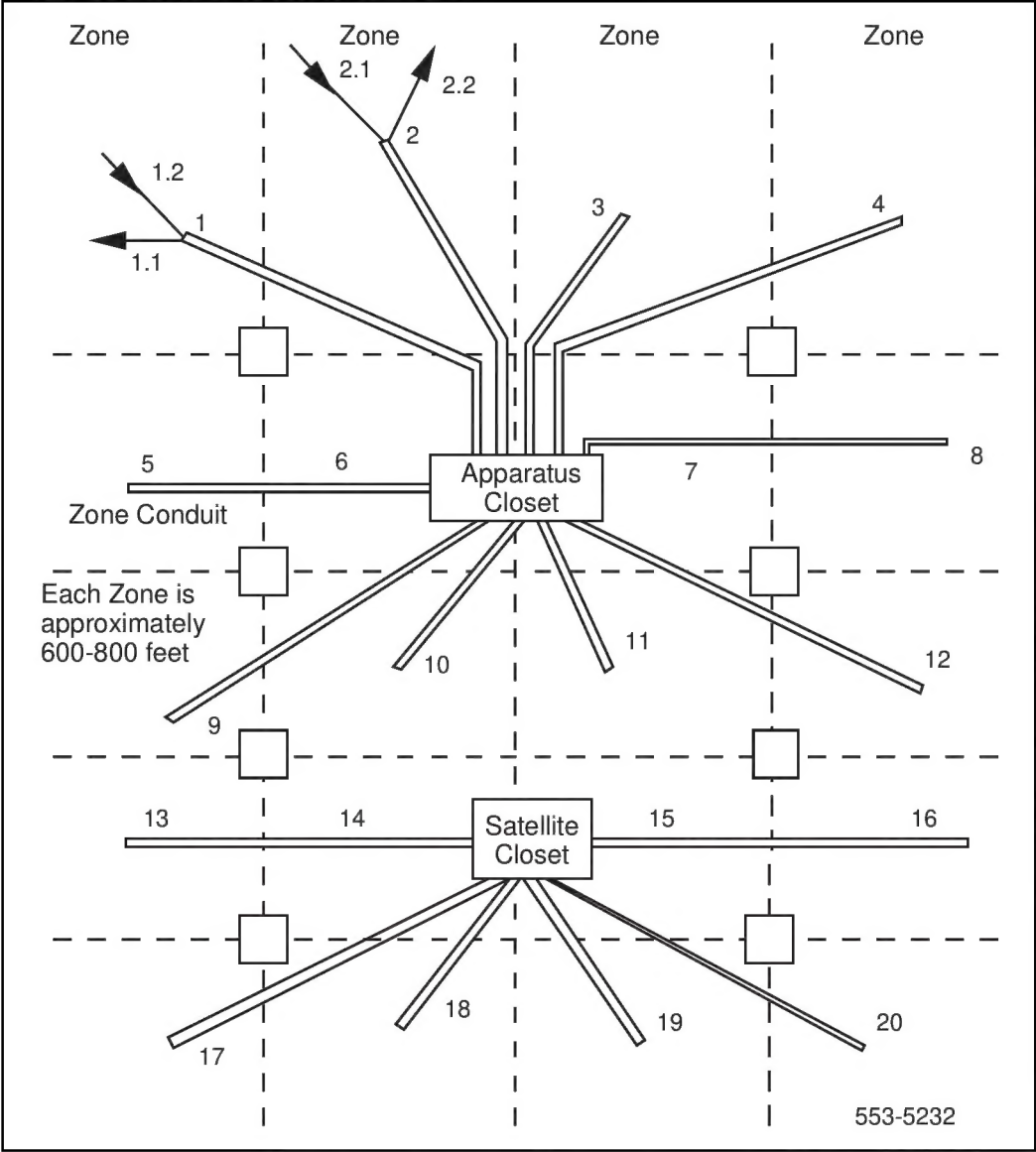
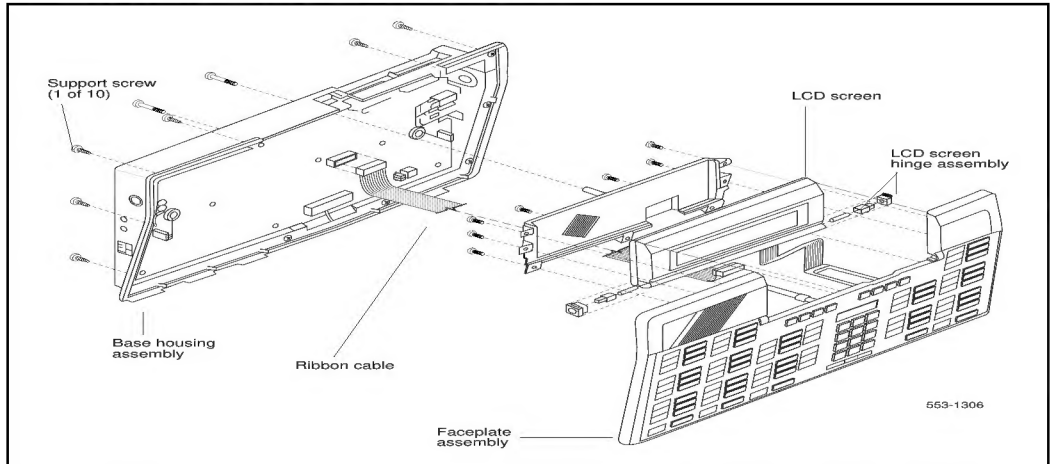


Figure 3
NE-500/2500-type telephones—limits and cabling



Procedure 1
Installing wiring

- 1 Assign a number to the wire or cable used.
- 2 Attach the assigned number to the wire or cable at the end nearest the telephone, using a cable marker.
- 3 Run the wire or cable between the telephone location and nearest cross-connect point (if not previously run).
- 4 Connect the cable or wire to the telephone connecting block.
- 5 Designate the telephone connecting block.
- 6 Cross-connect the pairs at intermediate cross-connect points (if required) and terminate at the cross-connect terminal.
- 7 Terminate leads at the cross-connect terminal and designate the blocks according to the house cable plan.

Table 1
Terminal connections

Connecting block Designations			Inside wiring Colors	
NE-47QA or QBB1B	NE-284-74-50 01 adapter	NE-625F TELADAPT plugs and jacks	Z station wire	16/25-pair cable
G	1T	T1 (G)	G	W-BL
R	1R	R1 (R)	R	BL-W
BK	X1	AUX (BK)	BK	W-O
Y	X2	GND (Y)	Y	O-W
5	R	T2 (BL)		W-SL
6	B	R2 (W)		SL-W

Normal operating ranges

Telephones The normal operating range for SL-1 telephones, with and without add-on modules, is 189 Ω or 6000 cable feet (1830 m), whichever is reached first. For example:

22 AWG wire range = 6000 feet (1830 m)

24 AWG wire range = 3700 feet (1125 m)

26 AWG wire range = 2300 feet (700 m)

The outside plant cable must not exceed 1 Ω per mile, or 189 Ω per 6000 kilometers.

SL-1 telephones equipped with a QKK1 extension kit have a maximum range of 8000 feet (2440 m). For example:

22 AWG wire range = 8000 feet (2440 m)

24 AWG wire range = 5500 feet (1675 m)

26 AWG wire range = 3690 feet (1125 m)

The outside plant cable must not exceed 0.085 Ω per mile, or 189 Ω per 6000 kilometers.

Note: The 24 V and 15 V supplies can be obtained from the QUT1 centralized power supply located at the cross-connect terminal. A separate fuse must be used for each set.

Meridian Modular Telephones have a maximum permissible loop length of 3500 ft (915 m), assuming 24 AWG (0.5 mm) wire with no bridge taps. A 15.5 dB loss at 256 kHz defines the loop length limit.

Attendant consoles The normal operating range for the QCW1C (or earlier vintage) and QCW2A attendant consoles, with and without add-on modules, is 189 Ω or 6000 cable feet (1830 m), whichever is reached first. For example:

22 AWG wire range = 6000 feet (1830 m)

24 AWG wire range = 3700 feet (1125 m)

26 AWG wire range = 2300 feet (700 m)

The normal operating range of the QCW1D and QCW2B (or later vintage) attendant consoles is 8000 cable feet (2440 m) using cable rated at a maximum of 0.085 Ω per mile (1600 m). For example:

22 AWG wire range = 8000 feet (2440 m)

24 AWG wire range = 5500 feet (1675 m)

26 AWG wire range = 3690 feet (1125 m)

The normal operating range of the M1250 attendant console is 8000 cable feet (2440 m) using cable rated at a maximum of 0.085 Ω per mile (1600 m). For example:

22 AWG wire range = 8000 feet (2440 m)

24 AWG wire range = 5500 feet (1675 m)

26 AWG wire range = 3690 feet (1125 m)

Note: The 24 V and 15 V supplies can be obtained from QUT1 centralized power supply located at the cross-connect terminal. A separate fuse must be used for each console. You can also obtain 24 V of power from a QPC61 line card. The maximum resistance is 30 Ω .

The outside plant cable must exceed 1 Ω per mile, or 189 Ω per 6000 kilometers.

M2250 attendant consoles have a maximum permissible loop length of 3500 ft (915 m), assuming 24 AWG (0.5 mm) wire with no bridge taps. A 15.5 dB loss at 256 kHz defines the loop length limit.

Figure 4
SL-1 telephones—limits and cabling

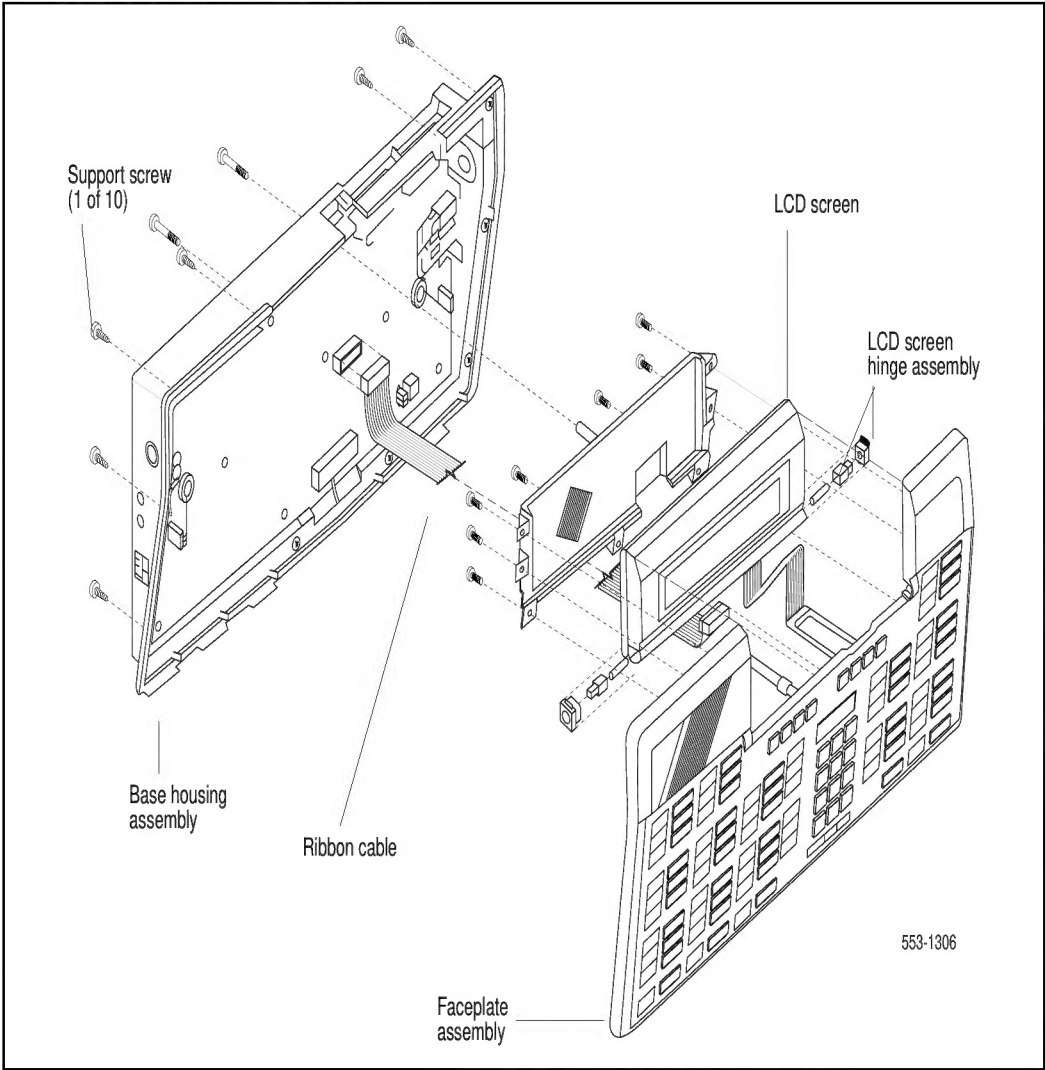


Figure 5
QCW-type attendant console—limits and cabling

